



## **Environmental Risk Assessment**

**Version 2 - Nov 2024**

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Trading as JAYPLAS  
Heol Y Mynydd,  
Gorseinon,  
Swansea  
SA4 4NY

**Grid reference: SS 59469 99671**

## Revision History

Version	Date	Comments	Author	Approved by
1	May 2024	First document for permit application	V Cooper	K Struthers
2	Nov 2024	2.3 Receptor Plan updated 2.5 List of key receptors 2km from site added	V Cooper	K Struthers
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Appendix 1 – Receptor Plan drawing no. SWA-DWG-EP-13

## 1. Introduction

- 1.1 At the time of applying for the environmental permit the site is not operational and no waste is on site. The environmental permit application is what Jayplas are proposing to do on site and the infrastructure changes that will be implemented. This Environmental Risk Assessment (ERA) has been written including the infrastructure improvements proposed for the site and considers the potential risks associated with the non-hazardous plastic recycling facility at Heol Y Mynydd, Gorseinon, Swansea SA4 4NY once the proposed developments for the site have been completed. The site is centrally located at grid reference SS 59469 99671.
- 1.2 The site is a plastic recycling facility, however the site will receive other recyclables as a consequence of the plastic recycling facility activities:
- a. The plastic bottles delivered to the site may contain drinks cans, these are separated in the mechanical and optical sort process at the start of the plastic recycling process. Mixed packaging and mixed recycling EWC codes have been included in the list of waste applied for to allow for this. After sorting the low volumes of separated metal cans will be stored externally in a baled format and then sent for onward reprocessing off site.
  - b. Occasionally a producer may put a bale of cardboard on the same articulated vehicle to save road miles, therefore cardboard EWC codes have been included in the list of wastes accepted on the environmental permit application to allow for the infrequent occasion that this might happen. The low volumes of cardboard waste will be stored externally and may be baled if required and then sent for onward reprocessing off site.
- 1.3 Due to the site receiving mixed packaging and cardboard, specific EWC codes have been included in the list of wastes accepted on the environmental permit application to allow for the infrequent occasion that this might happen.
- 1.4 The following will be stored on site:
- Inbound Wastes:
- a. Separated plastic waste for reprocessing
  - b. Separated plastic waste received on site which may be for storage only and sent off site for reprocessing elsewhere.
  - c. Mixed packaging waste i.e mixed bottles and cans, for sorting and then reprocessing of the plastic recyclables
  - d. Low volumes of cardboard waste

Outbound Wastes:

- a) Separated plastic baled recyclables
- b) Separated metal cans for onward reprocessing (low volumes)
- c) Separated cardboard for onward reprocessing (low volumes)

Outbound non-wastes

- a) Bagged pellet and flake which has met end of waste status through the reprocessing on site

1.5 The site will perform the following specified waste management operations include waste disposal and waste recovery operations listed Annex I and II of The Waste Framework Directive 2008/98/EC:

R3: Recycling or reclamation of organic substances.

R5: Recycling or reclamation of other inorganic materials.

R12: Exchange of waste.

R13: Storage of waste pending recovery

D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced)

1.6 Once operational, all environmental risks identified in this document will be acted upon accordingly by site management to ensure all environmental risks can be appropriately managed/controlled.

## 2. Site Receptors

2.1 The site is located 1km north east of the town of Gorseinon separated from residential and other industrial properties. To the east lies an area of established woodland, beyond which lies the M4 motorway. The areas to the south and west of the site are occupied by residential areas, as well as areas of corresponding infrastructure and areas of open land/woodland and recreational areas.

2.2 The closest residential property is a single farmhouse 275m North, the closest residential development is Pontardulais Road 330m West. The closest industrial building is Krislyn Motors 345m North West and the closest industrial and retail area is 760m South.

2.3 Please see Receptor Plan drawing no. SWA-DWG-EP-13 at Appendix 1 below. Receptor Plan drawing no. SWA-DWG-EP-13 provides a visual of the site location and

receptor areas 1km from the site are identified by coloured areas. Also attached to the Receptor Plan are more detailed maps identifying the receptors 2km from the site.

## 2.4 Google map image



## 2.5 List of key receptors 2km from the site

Please see Receptor Plan drawing no. SWA-DWG-EP-13 at Appendix 1 below for maps which correspond with the list below.

Designation/ Habitat	Name	Distance
SSSI	Nant y Crimp	Approx. 1.95km
SSSI	Burry Inlet and Loughor Estuary	Approx. 1.7km NW and 1.6km SW
Woodland	Ancient Semi Natural	Approx 918m NW
Woodland	Restored Ancient and Semi Natural	Approx 312m east
Historic Monuments	Cefn arda pit ss59459954 coal mine	Within permit boundary
Historic Monuments	- Hall, brunant road, gorseinon, ss58989909 chapel - English, pengelli, birchgrove, llandeilo talybont sn5900 chapel - Melin mynach; monks mill ss59279905 mill - Coalbrook, old coal pit sn591002 coal mine - Chapel remains grovesend sn59190039 chapel - Brynteg (1) independent sunday school (vestry), brynteg road, gorseinon ss58749927 chapel - Mountain colliery ss59229926 coal mine	Within 500 meters
World Heritage Site	Mine, Gorseinon	Within permit boundary

World Heritage Site	<ul style="list-style-type: none"> <li>- Bridge- Bridge, Melin Mynach, Gorseinon</li> <li>- Colliery- Coal Pits, Penyrheol and Mountain Colliery (x2)</li> <li>- Early Grist Corn Mill, Melin Mynach, Gorseinon</li> <li>- Dye-house, Melin Mynach, Gorseinon</li> <li>- Engine House, Melin Mynach, Gorseinon</li> <li>- farmstead- Bryn-yr-arad Farm (x2) and Gors-fawr Farm (x2)</li> <li>- Formal Gardens, Melin Mynach, Gorseinon</li> <li>- Mill House, Melin Mynach, Gorseinon</li> <li>- Mine, Gorseinon (x9 ) and Mine, Penllergaer</li> <li>- paper mill- Melin Mynach Paper Mill, Gorseinon</li> <li>- Quarry, Grovesend</li> <li>- steel work- Grovesend Steel and Tinplate Works</li> <li>- woollen mill- Melin Mynach Woollen Mill, Gorseinon</li> </ul>	Within 500 meters
Aquifer Designation (Superficial)	Secondary (undifferentiated)- Till, Devensian- Rock D- Diamicton	
Aquifer Designation (Bedrock)	Grovesend Formation- Secondary A	
Local Wildlife Sites	Coalbrook Grasslands. Site Code: 330	275m NW
Local Wildlife Sites	Upper Mynydd Garn goch Common. Site Code: 202	265m East
Local Wildlife Sites	<ul style="list-style-type: none"> <li>- Waungron to Gowerton Railway line. Site code: 334</li> <li>- Lower Lliw Corridor &amp; Llan Confluence. Site Code: 326</li> <li>- Brynlliw Grasslands. Site Code: 329</li> </ul>	Within and surrounding permit boundary
Surface Water Courses (sinks/issues/ springs/wells etc.)	<ul style="list-style-type: none"> <li>- Surface water courses within site boundary (part of the drainage system)</li> <li>- Coal Brook along northern and eastern edge of permit boundary</li> <li>- Afon Lliw to the east of the site</li> </ul>	Within and surrounding permit boundary
Recreation	<ul style="list-style-type: none"> <li>- recreation ground (Parc Melyn Mynach)</li> <li>- Gower Way footpath</li> <li>- Penyrheol Leisure Centre</li> <li>- Melin Mynach Pumptrack</li> <li>- Gorseinon (Brynteg) Congregational</li> </ul>	<p>To the south To the East 800m SW 500m SW 1.3km SW</p>

### 3. Environmental Risk Assessment Table

3.1 The following pages contain the site-specific risk assessment for the site with appropriate remedial actions, recommendations and comments included for each identified hazard, potential contaminant, or situation.

3.2 The table also contains references to the appropriate section(s) of the site's EMS for additional management procedures.

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
<i>What is the agent or process with potential to cause harm?</i>	<i>What are the harmful consequences if things go wrong?</i>	<i>How might the receptor come into contact with the source?</i>	<i>What is at risk? What do I wish to protect?</i>	<i>How likely is this contact?</i>	<i>How severe will the consequences be if this occurs?</i>	<i>What is the overall magnitude of the risk?</i>	<i>On what did I base my judgement?</i>	<i>How can I best manage the risk to reduce the magnitude?</i>	<i>What is the magnitude of the risk after management?</i>
<b>Dust/Particulates</b>									
Particulate matter and dusts from delivery vehicles, handling and unloading wastes/materials including trafficked mud and debris, dust from waste storage and treatment.	Harm to human health - respiratory irritation and illness.	Air transport, deposition then inhalation.	Local human population	Very Low	High	<b>Low</b>	Waste types accepted at the site will mainly include source segregated materials that will have had some separation carried out at source to remove significant residues. All wastes will be delivered fully enclosed or sheeted and stored externally in baled form or bags, further reducing the dust generation potential.	All delivery and dispatch vehicles will be fully enclosed or sheeted. Delivery vehicles will fall under the European emissions classification of Euro 5 or Euro 6.	Very Low
	Nuisance - dust on property, clothing etc.	Air transport then deposition	Local human population	Very Low	Moderate	<b>Low</b>	<p>Proposed storage areas:</p> <p>1) Main yard The main storage yard will be located at the north side of the site, 375m from Heol Y Mynydd and behind the building.</p> <p>2) Side Yard The side storage yard will be located on the east side of the site, 190m from Heol Y Mynydd.</p> <p>Regarding receptors in the form of public highways, public footpath (Gower Way footpath to the east of the site), recreation ground (Parc Melyn Mynach to the south) and private roads, dust from the site poses very little risk to human health due to the transient nature of these</p>	<p>A vehicle speed limit of 10mph will be imposed at the site for Health and Safety grounds and to minimise environmental emissions.</p> <p>Waste delivery vehicle drivers will be advised not to leave vehicles idle when engine power is not required.</p> <p>If required, manual or mechanical sweeping will be undertaken at the site to prevent the build-up of dusty residues on site surfaces.</p> <p>All treatment of waste will be performed on an impermeable pavement. The core treatments activities will be performed in a building, the only exception to this will be the infeed to the sorting process. The bale breaker and infeed conveyor to the sort plant will be positioned</p>	Very Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
							<p>receptors, as members of the public are simply passing through these areas and no long-term dust exposure will occur.</p> <p>The nearest residential property is a single farmhouse 275m North, the closest residential development is Pontardulais Road 330m West. Therefore, due to the distance these residential areas are unlikely to be adversely affected by fugitive dust emissions.</p> <p>Waste is stored baled or bagged so there is no requirement for waste to be dropped from height on site.</p>	<p>under the canopy overhang of the building into the area.</p> <p>Water cannons on the external storage areas will be utilised (if considered necessary) where required to dampen surfaces and reduce potential dust emissions.</p> <p>Operational staff to be trained to assess dust generation at the site throughout the working day. Further visual assessment to be carried out daily by the site operations manager or nominated deputy.</p> <p>The site surfaces, both internal and external, will comprise impermeable concrete surfacing which will be easy to clean.</p>	
	Smothering of habitats and crops	Air transport then deposition	Local wildlife habitats/species	Very Low	Moderate	<b>Low</b>	<p>Waste types accepted at the site will mainly include source segregated materials that will have had some separation carried out at source to remove significant residues. All wastes will be delivered fully enclosed or sheeted and stored externally in baled form or bags, further reducing the dust generation potential.</p> <p>Low levels of dust will only be created by vehicle movements and the number of vehicle movements will also be low.</p>	<p>Good housekeeping will be implemented at all times to ensure the internal and external site areas do not have a build-up of dust and debris which could become airborne.</p> <p>Only warm air from the extruders omitted to air.</p>	Very Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
<b>Odours</b>									
<p>Fugitive odour from delivery and dispatch of wastes/materials</p> <p>Fugitive odours from waste unloading, handling and treatment of waste.</p> <p>Fugitive odour emissions from waste storage</p> <p>Fugitive odour release during an abnormal event such as a spill or leak</p>	Nuisance, loss of amenity	Air transport then inhalation.	Local human population	Low	Moderate	<b>Low-Moderate</b>	<p>Waste types accepted at the site will mainly include source segregated materials that will have had some separation carried out at source to remove significant residues. All wastes will be delivered fully enclosed or sheeted and stored externally in baled form or in bags.</p> <p>Waste will be treated within enclosed buildings.</p> <p>The nearest residential property is a single farmhouse 275m North, the closest residential development is Pontardulais Road 330m West..</p> <p>Receptors such as public highways and private roads are unlikely to be affected by odours due to their transient nature.</p>	<p>All delivery and dispatch vehicles will be fully enclosed or sheeted to minimise the risk of fugitive release of odour.</p> <p>Waste Pre-acceptance and acceptance checks will be conducted to ensure the waste is compliant and acceptable. Malodorous waste will not be accepted.</p> <p>The waste is generally collected by a Jayplas owned articulated vehicle and therefore the driver will see the waste before collecting it and delivering it to site, waste can therefore be refused before collection.</p> <p>Malodorous wastes will be rejected from the site upon delivery.</p>	Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
								<p>Waste handling and treatment will occur within the treatment buildings which will reduce the risk of fugitive odour emissions.</p> <p>First in, first out principles will be employed at the facility reception areas to ensure good management of waste and to prevent excessive storage times in so far as possible.</p> <p>Good housekeeping measures will be implemented to ensure that there is no build-up of waste residues which could become malodorous.</p> <p>Daily inspections of the site conditions and odour monitoring will be carried out to ensure that any issues are identified as soon as possible, and mitigation measures can be implemented. Operational staff will also be trained to assess any odour generation at the site throughout the working day and will alert the site operations manager, TCM or nominated deputy who will investigate the issue and take corrective action.</p>	Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
<b>Litter</b>									
Litter from waste delivery vehicles  Litter from waste stored on site  Litter from the treatment activity.	Nuisance, loss of amenity, road traffic accidents and harm to animal health	Vehicles entering and leaving site.  Air transport and then deposition	Local human population, livestock and wildlife. Local road users.	Low	Moderate	<b>Low-Moderate</b>	Waste types to be permitted at the site may generate litter.	All delivery and dispatch vehicles will be fully enclosed or sheeted to minimise the risk of litter.  Wastes will be stored externally in compacted bales or bags only. Bales will be tied with 5-6 metal ties (min.).  The site will have fencing around the storage areas which will contain any blown litter. In the unlikely event fencing fails to capture any windblown litter, litter picking will be conducted within 24 hours.  Treatment will occur within the buildings. The conveyor into the sort process will be under a canopy.  Daily inspections of the site will be conducted which will include inspections for evidence of mud, debris, and litter on the site surfaces. Litter picking will be conducted at the site upon signs of litter generation. The source of any litter will also be investigated and remediated.	Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
<b>Mud and Debris</b>									
Waste debris and mud on local roads  Tracking of mud and debris onto public roads causing accident, hazards and nuisance to road users.	Nuisance, loss of amenity, road traffic accidents and harm to animal health	Vehicles entering and leaving site.	Local human population, livestock and wildlife. Road users	Low	Low	Low	Due to the nature of the wastes and associated operations present a low potential to generate significant quantities of mud.	The permitted area will include concreted storage areas, tarmac internal roadways and the main site joins to the public highway. Therefore no vehicles will come into contact with mud.  Waste is collected from industrial premises and waste facility therefore the collection vehicles will not have come into contact with mud when collecting the waste.	Low
<b>Scavengers, Insects and Other Pests</b>									
Scavenging animals and scavenging birds, Pests (e.g. flies) attracted to or infesting wastes	Harm to human health - from waste carried off site and faeces. Nuisance and loss of amenity.  Negative effects on habitats and crops	Air transport and over land.	Local human population, crops and local habitats	Low	Moderate	Low	Wastes will be handled and treated within enclosed buildings.  The types of waste proposed to be accepted for processing at the facility are not of the nature that could typically attract pests, i.e., non-putrescible.  The site is located near a rural area which may increase the potential of pests.	All delivery and dispatch vehicles will be fully enclosed or sheeted. The waste is generally collected by a Jayplas owned articulated vehicle and therefore the driver will see the waste before collecting it and delivering it to site, waste can therefore be refused before collection.  Waste Pre-acceptance and acceptance checks will be conducted to ensure the waste is compliant and acceptable. Infested loads will be rejected.	Low

								<p>Waste treatment will occur within the facility buildings.</p> <p>Good housekeeping will be implemented at the site to ensure there is not build up of waste residue within the treatment facility buildings or the external site areas which could attract scavengers and pests. Where required, manual or mechanical sweeping will be carried out to ensure site surfaces are clean.</p> <p>The maximum duration of waste storage at the site will be 6 months, although it is expected to be much shorter.</p> <p>In the unlikely event that a waste stockpile becomes infested with insects, the material will be put through the wash process within 24 hours. Actioning this measure quickly will help reduce the risk of an infestation spreading to other waste stockpiles.</p> <p>A third party pest control contractor will be employed to install bait boxes for rats. In the event that the daily site inspections find evidence of the presence of scavengers such as rats and other pests, the third party pest control company will be requested to attend site again.</p> <p>A record of all incidents will be recorded in the Environmental Monitoring Report.</p>	Low
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Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
<b>Noise &amp; Vibration</b>									
Noise and vibration caused by engine noise and vibrations from site plant and equipment, lorry movements etc.	Nuisance, loss of amenity, loss of sleep or harm.	Noise through the air and vibration through the ground.	Local human population	Low	Moderate	<b>Low</b>	<p>The nearest residential property is a single farmhouse 275m North, the closest residential development is Pontardulais Road 330m West. There is therefore significant intervening distance between the site and residential receptors.</p> <p>Waste operations will take place internally, which will provide a barrier to noise and vibration.</p> <p>Public Highways in between site and residential areas will generate noise themselves.</p>	<p>Waste handling and treatment will occur within the facility buildings. The storage areas will have forklift truck movements, however the storage areas are away from the main road and residential areas. In addition, the buildings have been positioned so that the front of the buildings face north, towards the storage yard to minimise any noise emissions associated with the movement of materials in and out of the buildings.</p> <p>A site speed limit of 10mph will be enforced. Internal roads and surfaces will be maintained and kept free of ruts and potholes to minimised body slap.</p> <p>All plant and equipment used on site will be operated and maintained in accordance with manufacturer recommendations. Vehicles will be switched off when not manoeuvring.</p> <p>Noise levels will be monitored daily to ensure that operations are not resulting in significant levels of noise beyond the site boundary.</p>	Low

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Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
<b>Water</b>									
Generation of contaminated run-off and leachate from wastes and other hazardous substances handled on site (e.g. fuels, oils etc).	Harm to protected site through nutrient enrichment, leachate, contaminated surface water runoff	Surface water run-off, and sub-surface transport of leachates then base and spring flows to rivers.	Groundwater, surface water bodies and their associated habitats.	Moderate	Moderate	<b>Moderate</b>	<p>Run-off from external storage yards will discharge to surface waters.</p> <p>The waste operations buildings will have sealed drainage systems.</p> <p>The discharge point from the interceptor will be equipped with an automatic closure valve that can be shut-off in the event of emergency.</p>	<p>All internal and external operational areas of the site will comprise engineered impermeable surfacing. Internal areas will comprise sealed drainage systems.</p> <p>All wastes treated internally only. Only baled, bagged or containerised wastes will be stored externally.</p> <p>All storage tanks will be bunded or double skins with a minimum capacity of 110% of the primary tank capacity.</p> <p>Drums and other containers of potentially polluting substances will be stored on drip/spill-trays on areas of impermeable surfaces.</p> <p>Surface water run-off on external areas will be collected directed to a tank and interceptor system prior to discharge from the site</p> <p>Spill kits will be located around internal and external areas to deal with leaks/spills</p>	Very Low

Flooding of the site	Contamination of buildings, gardens, agricultural land, natural habitats etc downstream resulting from waste washed off-site.	Flood waters	Local human population, crops and local habitats.	Moderate	Low	<b>Moderate</b>	<p>Upon review of the Natural Resources Wales Flood Risk Map, areas of the site in high-risk and medium-risk area of flooding from Rivers and Sea. Parts of the site have been classified as a Flood Zone 3 (During a surface water flood event, depths of surface water at the property may reach and exceed 0.3m) and Flood Zone 2 (areas with a 0.1 – 1% chance of flooding and areas with more than 1% chance of flooding per year respectively.) This is mainly east of the site from the River Lliw.</p> <p>The Swansea Council Flood Risk Management Plan 2015 stated land immediately adjacent to the River Lliw showed fluvial flood risk is evident, it is also stated in the report that it is believed that the flood risk is overstated as the capacity of the culverts were not included in the modelling.</p> <p>The buildings on the site and the proposed storage areas are on an elevated position and there is no history of flooding on the site.</p> <p>Baled nature of the waste presents limited risk for floating hazards or debris, or to flood water quality.</p>	<p>The storage of potential polluting substances will be outside any flood risk areas.</p> <p>All wastes stored externally will be outside any flood risk areas, in bales, bags or containerised.</p> <p>Surface water discharge rates are designed to greenfield rate of run-off.</p> <p>Only non-hazardous wastes will be handled at the site.</p>	Low
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Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
<b>Accidents</b>									
On site hazards: wastes, machinery, vehicles, surface water attenuation pond.	Bodily injury	Direct physical contact	Local human population	Very Low	High	<b>Low-Moderate</b>	The site will be fully secured.  Waste treatment operations will be carried out internally.	The site will be surrounded by continuous, 2.4 metre high chain-linked or high paladin fencing and gates will be closed when not in use and locked out of hours.  Signs will be present at the site entrance and along the perimeter to deter trespassers.  All site staff and visitors will receive an induction to the site to ensure safety protocols are adhered to.  All site staff will receive thorough training on the site safety procedures and the use of the plant and equipment on site.  Appropriate personal protective equipment (PPE) will be provided for all site staff, particularly those handling waste.  Designated pedestrian routes will be clearly marked around the site.	Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
<b>Fires</b>									
Fire resulting from arson/vandalism or an accident causing the release of polluting materials (smoke, fumes, leaks/spills, firewater) to air, water or land.	Harm to human health.  Degradation of air, soil and water quality.	Air transport, deposition then inhalation.  Direct run-off or discharge via the site drainage network  Percolation into ground and through unsaturated zone to groundwater	Local human population, wildlife, surface waters and groundwater	Moderate	Moderate	<b>Moderate</b>	Combustible and non-combustible waste will be accepted at the site.  Wastes will be stored externally.  Site drainage network discharge to surface waters.  CCTV monitoring site 24/7.  Sprinklers are available in the building and water cannons on the Main storage yard.	No fires are permitted on site. There will be a dedicated smoking shelter and smoking will not be permitted in any other location on site.  All flammable substances (e.g. fuels) will be kept in bunded / double skinned tanks located away from the waste buildings.  Waste handling and treatment will occur within the treatment facility buildings.  Office areas and buildings will be provided with smoke alarms and a dedicated fire alarm with audible signal. Other areas will be equipped with extinguishers in which the locations and types of extinguishers will be agreed with the local Fire Officer. These alarms are connected to an audible signal.  All fire-fighting equipment at the facility will be clearly marked and tested, at appropriate intervals, to confirm their suitability and functionality. Site personnel will be made aware of the locations of all fire-fighting	Low

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Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
								<p>equipment and will be trained in their correct use.</p> <p>The site will be surrounded by continuous 2.4 metre high chain-linked or high paladin fencing and gates will be locked shut outside of operational hours. Signs will be present at the site entrance and along the perimeter to deter trespassers.</p> <p>Plant and equipment will be operated and regularly maintained in line with manufacturers recommendations.</p> <p>Plant and equipment will be inspected daily as part of the site checks. In the event any damage is observed, it will be recorded and reported to the site operations manager, TCM or nominated deputy. Any repairs will be affected as soon as possible. Mitigation measures will be undertaken immediately if there is a possibility for ignition.</p> <p>The waste storage bays are separated by concrete fire walls. Stockpiles containing combustible waste will remain 1m below the top of the wall to ensure freeboard space and</p>	

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								prevent a fire from over topping the firewalls and entering the neighbouring storage bay.	
Leaks and Spillages from on-site plant/vehicles, waste or contaminated rainwater runoff (including firewater).	Deterioration of water quality, contamination of ground/surface waters,	Direct run off from site across ground surface, indirect runoff via the soil layer or transport through soil/groundwater	Groundwater, surface water bodies and their associated habitats.	Low	Moderate	<b>Low-Moderate</b>	<p>Only non-hazardous wastes will be handled at the site.</p> <p>Liquid wastes will not be accepted at the site.</p> <p>The site surface water collection networks will route run off via an interceptor and tank prior to entering the surface water system.</p>	<p>The waste treatment buildings will consist of impermeable pavement with a sealed drainage system.</p> <p>Spills kits will be strategically positioned around the site. A spill procedure is in place to deal quickly with any spillages and leaks of waste materials.</p> <p>External haulage routes consist of impermeable concrete pavement.</p> <p>A closure valve will be fitted to the discharge point from the interceptor, which can be shut off in the event of a large spill or fire.</p> <p>Each storage bay is constructed of concrete walls over an impermeable concrete pavement, with drainage directed to storage tank and interceptor prior to discharging to a watercourse located to the east of the site.</p>	Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
<b>Abnormal Conditions</b>									
Containment Damage	Contamination of surrounding land, groundwater and surface water.	Air transport then deposit or inhalation, direct run off	Local human population, crops and local habitats.	Low	Moderate	<b>Low-moderate</b>	<p>Only solid wastes are handled at the site.</p> <p>All wastes will be stored in baled form, bags or in containers.</p>	<p>The site layout is designed to allow mobile plant and other vehicles to move around the site with minimal risk of collision.</p> <p>All plant operators will be fully trained in the operation of plant to which they operate.</p> <p>All internal and external operational areas will be engineered with impermeable surfaces. Internal areas will comprise sealed drainage.</p> <p>The external yard drainage network will comprise a tank and interceptor with a valve to shut off the discharge in the event of a large/major containment breach.</p> <p>The internal sealed drainage system will be regularly inspected to ensure there are no issues or loss of containment. In the event an issue is found with the internal sealed drainage system, repairs will be carried out as soon as practicable.</p>	Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
Power loss	Harm to human health and local habitats and surface water via fugitive emissions  Nuisance to local human receptors via fugitive emissions	Airborne transport/runoff	Local human population, crops and local habitats	Very Low	Moderate	<b>Low - medium</b>	No major containment systems are reliant of power.  The cessation of process lines for a period will not result in significant increase in emissions.	Roller shutter doors can be operated manually.  The emergency drainage system will rely on a rising main to a holding tank, so fire water can be removed by tanker. The pump required to move the water up the rising main will be a diesel operated pump, so power loss will not have an impact.	Low
Vandalism and security breach	Bodily injury	Direct physical contact	Local human population	Low	Moderate	<b>Low-Moderate</b>	The site will be manned at all times. When the site is closed for the Christmas period security staff will be employed.	The site will be surrounded by security fencing.  The access gate will be closed at all times and locked shut outside of operational hours.  The site benefits from a full CCTV recording system and full alarm system.  Site security infrastructure will be inspected daily and recorded on the Daily All visitors to the site (including personnel) must report to the site office to sign in and sign out on exit.	Very Low

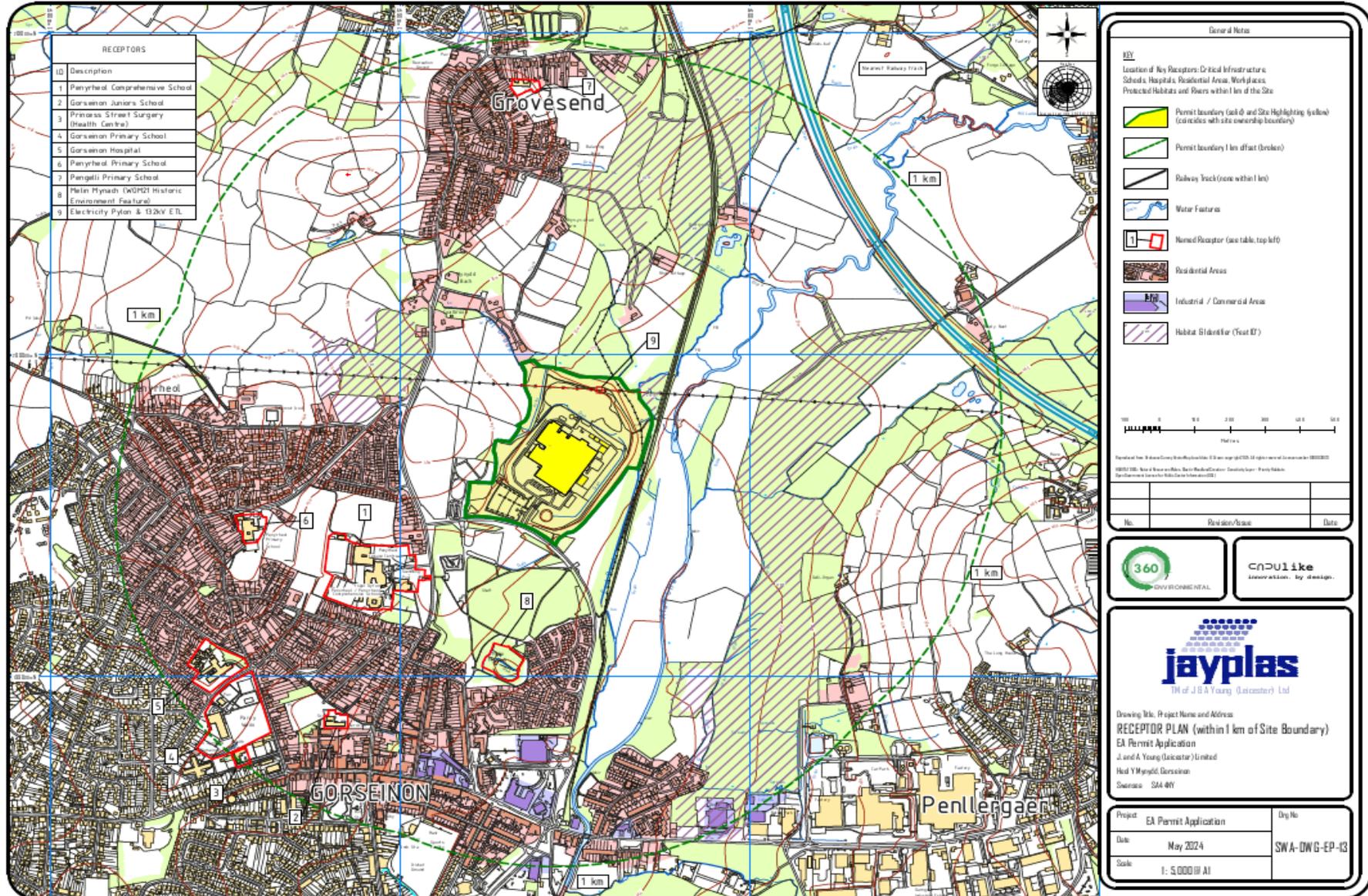
Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
Operator error	<p>Bodily injury</p> <p>Nuisance – dust, olfactory, and noise emissions</p> <p>Contamination of surrounding land, groundwater and surface water.</p>	Direct physical, air transport then deposit or inhalation, direct run off	Local human population, crops and local habitats.	Low	Moderate	<b>Low-Moderate</b>		<p>Technically competent people will oversee the management of activities at the site, in accordance with the fit and proper person requirements.</p> <p>Training (including refresher training) will be given to all site staff on the environmental permit, health and safety and incident response procedures.</p> <p>Site staff will be trained on site equipment/plant prior to first use and supervised by a technically competent person.</p>	Low

Emissions from plant or equipment due to abnormal conditions	Harm to human health - respiratory irritation and illness.	Air transport, deposition then inhalation.	Local human population	Low	Moderate	<b>Low-Moderate</b>	<p>Treatment plant lines are operated internally.</p> <p>The site is not within a AQMA area.</p>	<p>All machinery used on site will be operated and maintained in accordance with manufacturers' recommendations.</p> <p>The plant and equipment to be used on site will be classified as Euro 5 or Euro 6 for emissions ratings.</p> <p>All operational areas will be underlain with an impermeable concrete surfacing as is appropriate to the environmental risk posed by that part of the overall operation.</p> <p>All machinery will undergo regular checks and maintenance in line with manufacturers recommendations.</p> <p>All plant and equipment will be inspected for damage / leaks before and after use as part of daily operation and maintenance checks. Any damage will be recorded on a check sheet and reported to the site operations manager, TCM or nominated deputy.</p> <p>Any plant or equipment identified as being defective will be removed for active use and repaired as soon as possible.</p>	Low
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Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
Inadequate waste acceptance procedures	<p>Harm to human health - respiratory irritation and illness.</p> <p>Bodily harm</p> <p>Nuisance (e.g. dust for non-compliant particularly dusty waste loads)</p>	Transported by vehicle	Site operatives and site users	Low	Moderate	Low		<p>All site staff, particularly the site manager and TCM, will have knowledge of the Environmental Permit and on the types of waste accepted and prohibited at the site.</p> <p>Accompanying paperwork will be reviewed to ensure the details are correct and that all fields are completed.</p> <p>The waste is generally collected by a Jayplas owned articulated vehicle and therefore the driver will see the waste before collecting it and delivering it to site, waste can therefore be refused before collection.</p> <p>All waste loads will be inspected.</p> <p>Any non-conforming wastes will be identified by the site operatives. This will either be re-loaded onto the delivery vehicle for immediate transfer off site, or where this is not possible the waste will be placed into quarantine area and the transfer of this waste to an appropriate facility will be organised as soon as possible.</p>	Low

Data and information				Judgement				Action (by permitting)	
Source	Harm	Pathway	Receptor	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual risk
<b>Protected Species and Habitats</b>									
On site activities	Harm to a protected site through contamination, nutrient enrichment, smothering, disturbance, predation etc.	Any	Protected species and habitats	Very Low	Moderate	<b>Low</b>	<p>All wastes will be handled within the waste treatment buildings that comprises impermeable pavement and a sealed drainage system.</p> <p>The Melin Mynach (WOM21) historical environmental feature is situated 270m south of the site.</p> <p>There are no protected species, habitats, SSSI's, Ramsar sites or environmental protected sites.</p>	<p>Waste delivery and dispatch vehicles will be fully enclosed or sheeted.</p> <p>Waste handling and treatment will occur within the buildings which has roller shutter doors. This level of containment will significantly reduce the risk of the waste on site to affect surrounding areas.</p> <p>The mitigation and control measures for the site to prevent fugitive emissions which could affect the surrounding area have been outlined previously in this risk assessment.</p>	Very Low

Appendix 1 - Receptor Plan drawing no. SWA-DWG-EP-13



RECEPTOR PLAN SWA-DWG-EP-13 PROVIDES A VISUAL SUMMARY OF RECEPTORS WITHIN 1KM OF SITE BOUNDARY.

BELOW FURTHER DETAILED INFORMATION:

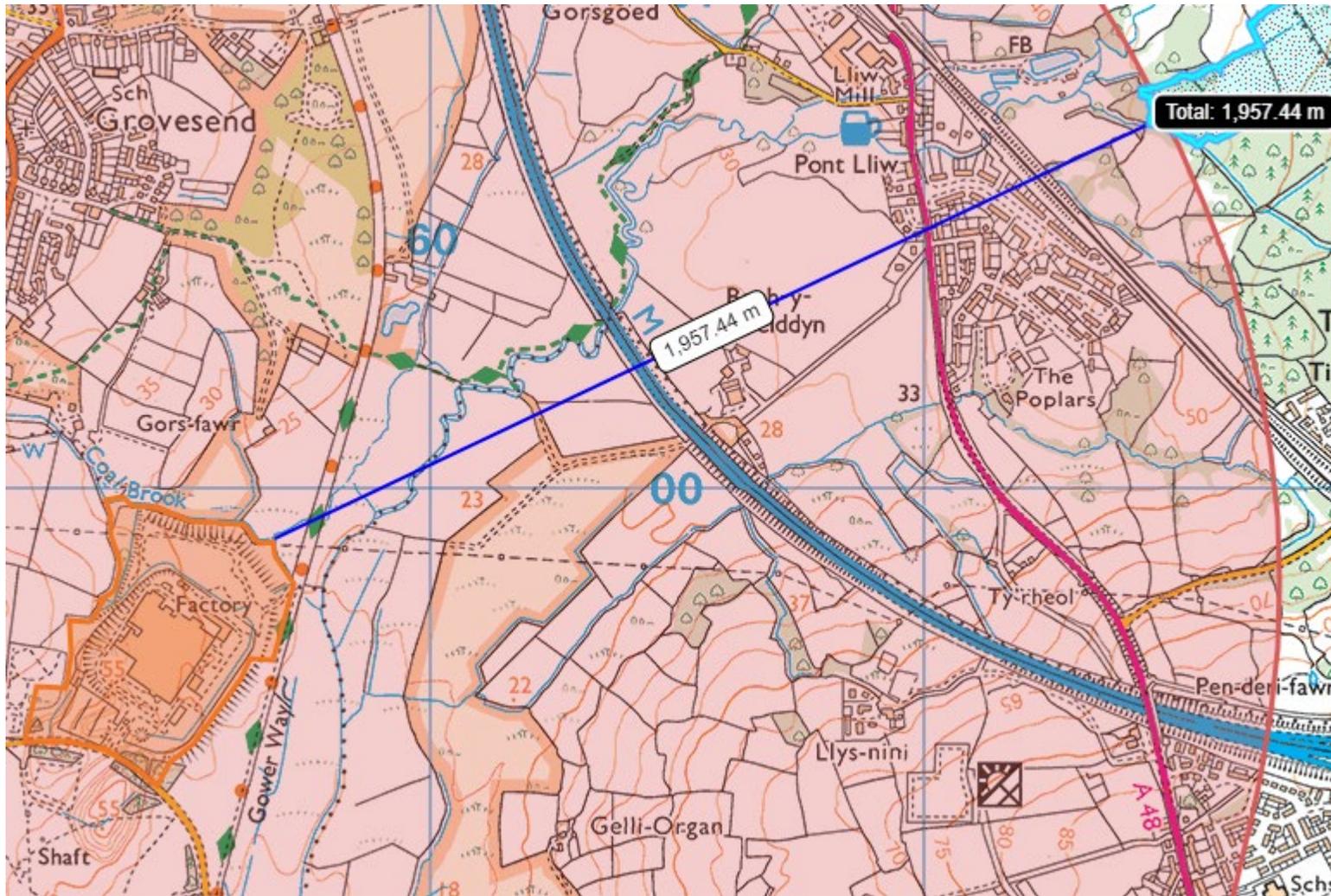
- RECEPTORS WITHIN 1KM AS COLOURED ON RECEPTOR PLAN SWA-DWG-EP-13
- RECEPTORS UP TO 2KM FROM SITE

Detail below provided by National Resources Wales (NRW) November 2024

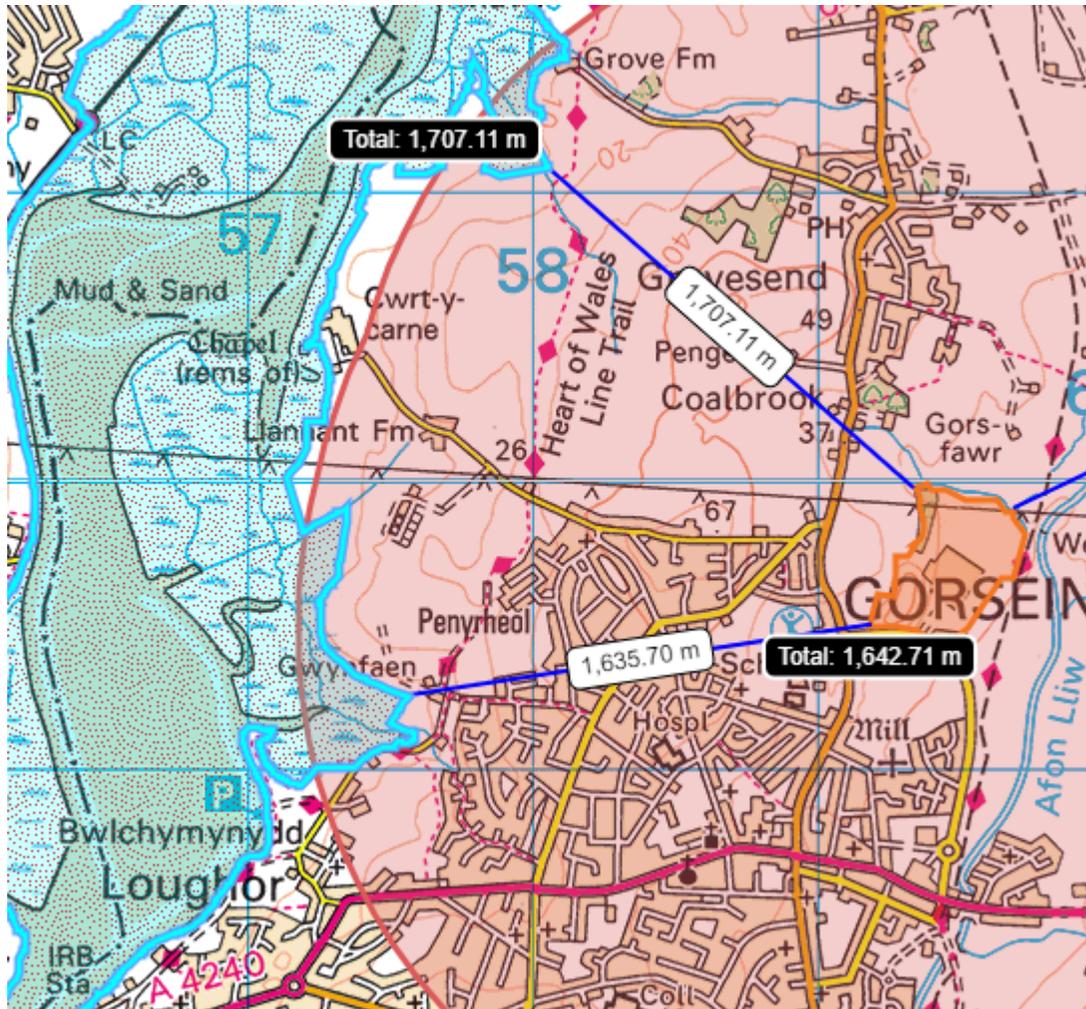
**PAN-026035 Receptor information**

Within 2km: sites of special scientific interest (SSSIs)



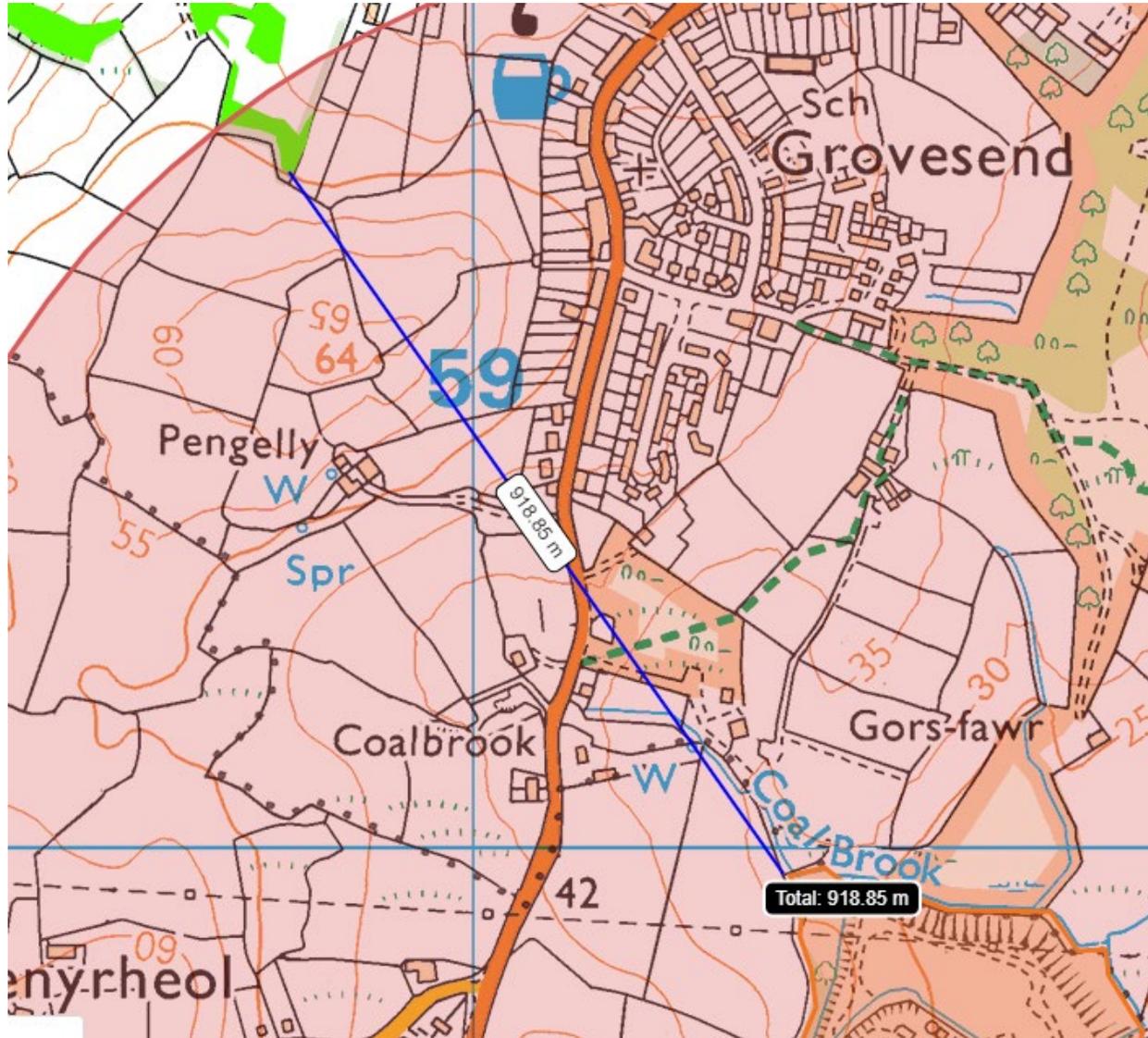


- Nant y Crimp SSSI approx. 1.95km

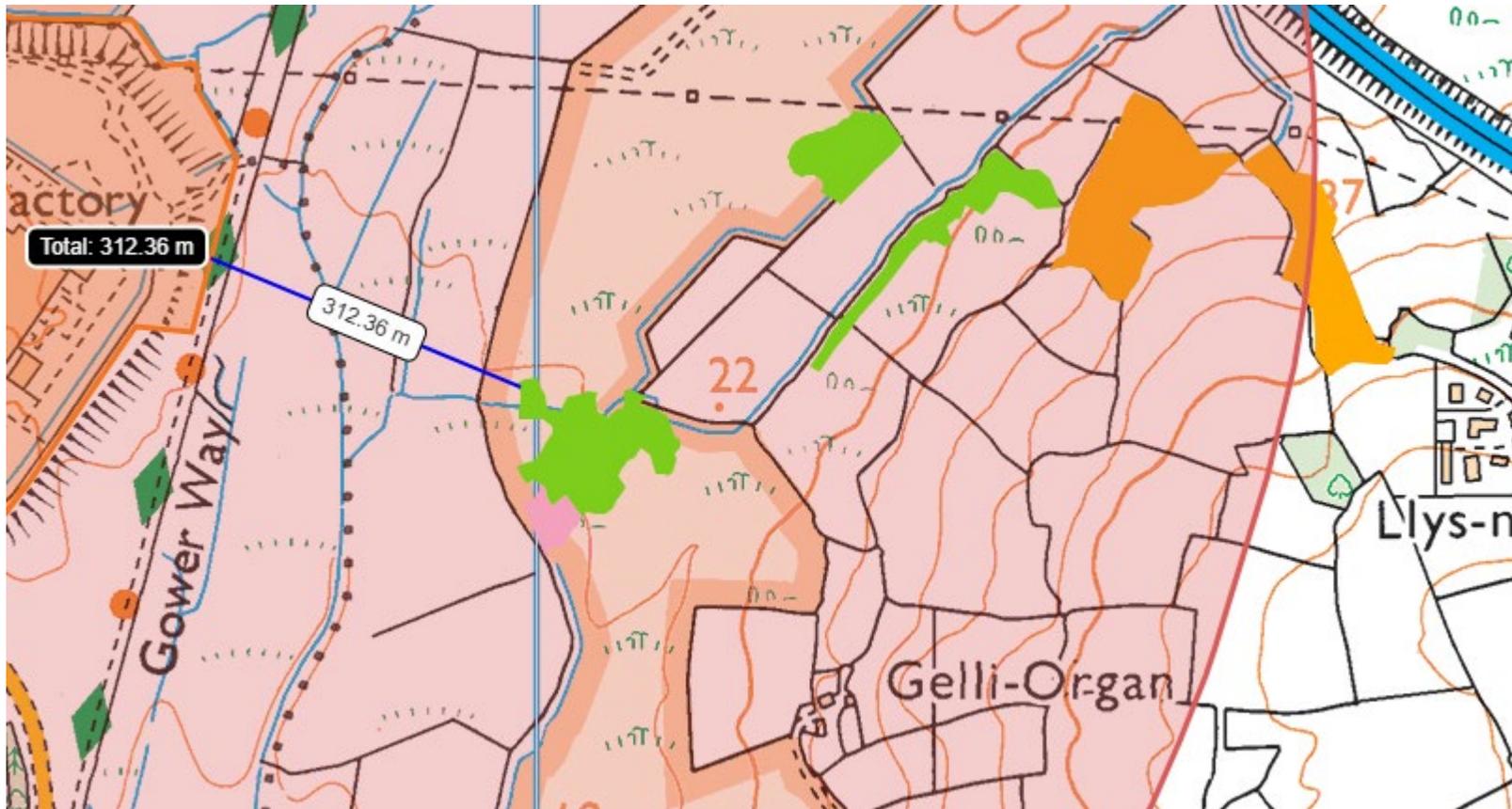


- - Burry Inlet and Loughor Estuary SSSI approx. 1.7km to the NW and 1.6km to the SW

ancient woodlands within 1km



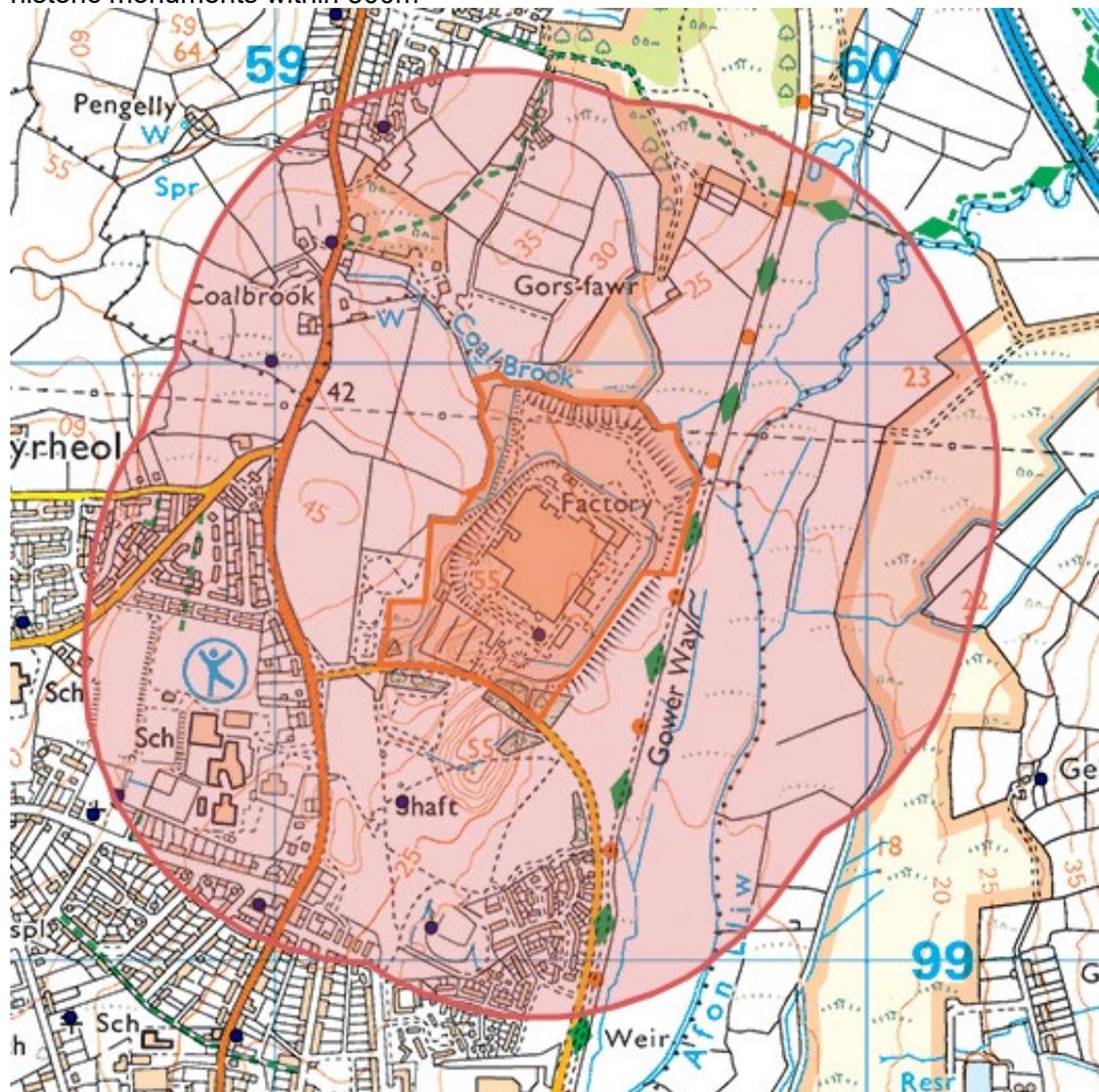
- Ancient Semi Natural Woodland approx 918m to the NW



- Restored Ancient Woodland Site (orange)
- Ancient Semi Natural Woodland (green)
- Ancient Woodland Site of Unknown Category (pink)

Approx 312m to the east

historic monuments within 500m



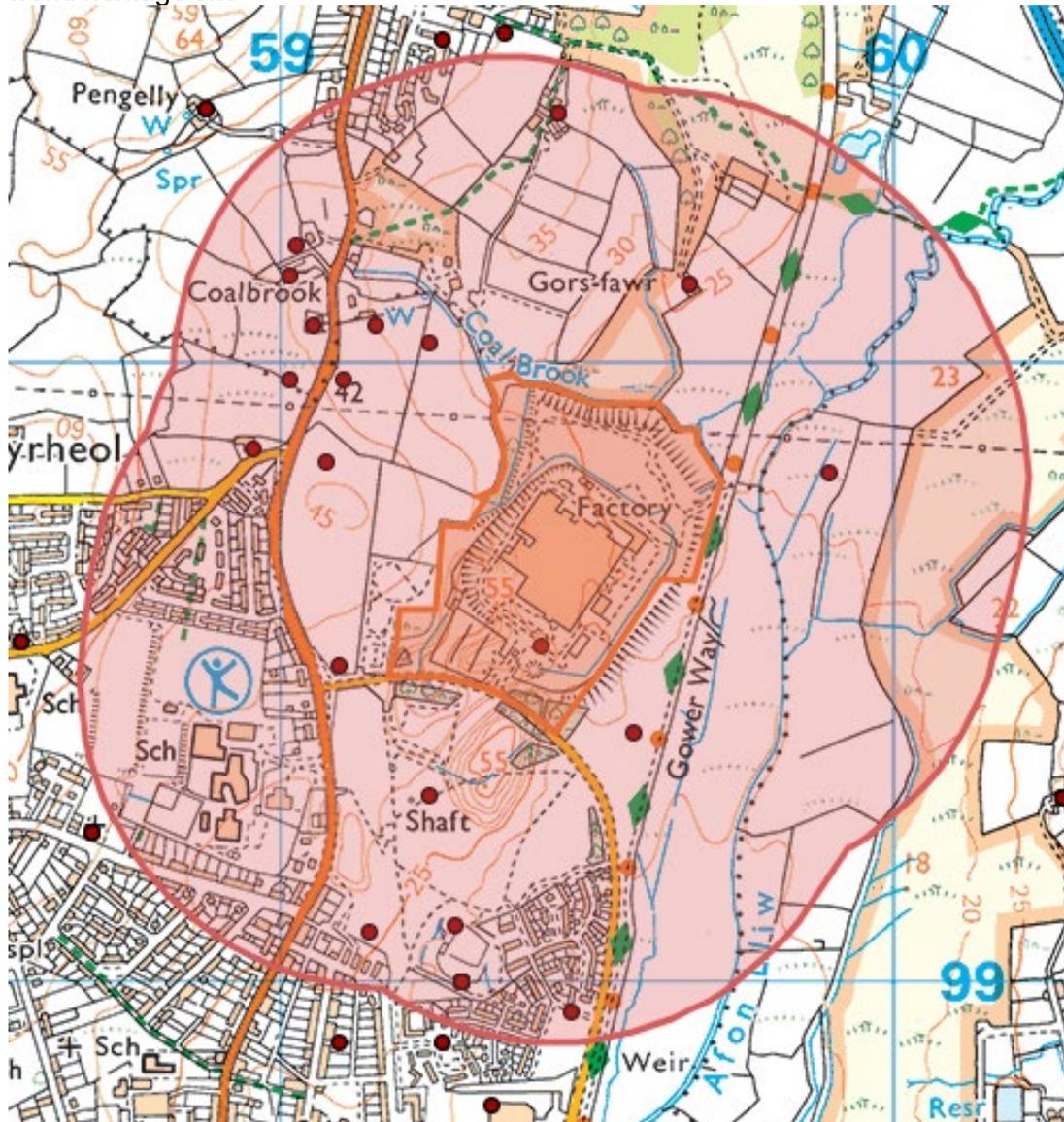
Within permitted boundary:

- Cefn arda pit ss59459954 coal mine

Within 500 meters:

- Hall, brunant road, gorseinon, ss58989909 chapel
- English, pengelli, birchgrove, llandeilo talybont sn5900 chapel
- Melin mynach; monks mill ss59279905 mill
- Coalbrook, old coal pit sn591002 coal mine
- Chapel remains grovesend sn59190039 chapel
- Brynteg (1) independent sunday school (vestry), brynteg road, gorseinon ss58749927 chapel
- Mountain colliery ss59229926 coal mine

world heritage site



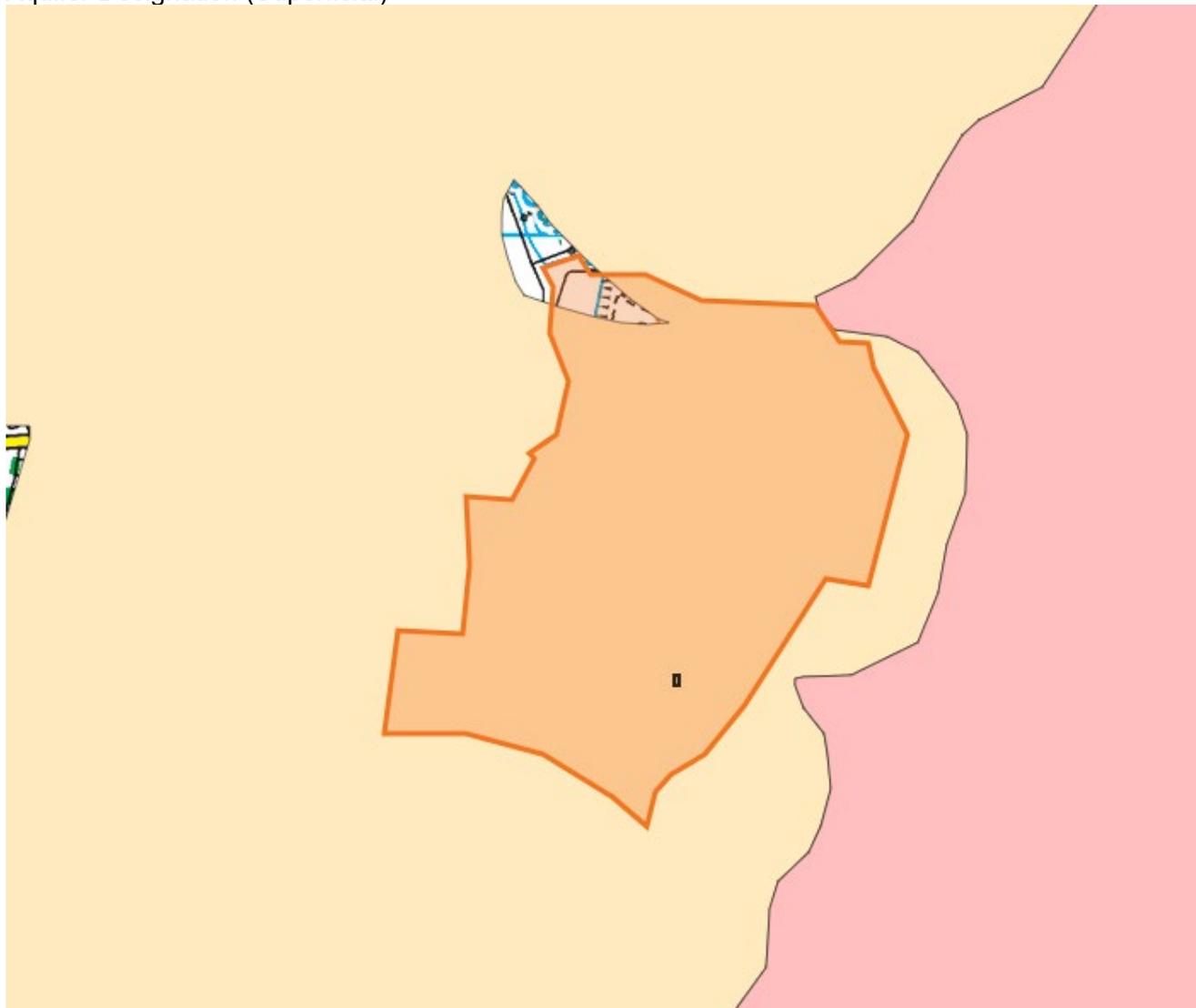
Within permitted area:

- mine-Mine, Gorseinon

Within 500 meters:

- Bridge- Bridge, Melin Mynach, Gorseinon
- Colliery- Coal Pits, Penyrheol and Mountain Colliery (x2)
- corn mill- Early Grist Corn Mill, Melin Mynach, Gorseinon
- dye house- Dye-house, Melin Mynach, Gorseinon
- engine house- Engine House, Melin Mynach, Gorseinon
- farmstead- Bryn-yr-arad Farm (x2) and Gors-fawr Farm (x2)
- formal garden- Formal Gardens, Melin Mynach, Gorseinon
- mill house- Mill House, Melin Mynach, Gorseinon
- mine-Mine, Gorseinon (x9 ) and Mine, Penllergaer
- paper mill- Melin Mynach Paper Mill, Gorseinon
- quarry -Quarry, Grovesend
- steel work- Grovesend Steel and Tinplate Works
- woollen mil- Melin Mynach Woollen Mill, Gorseinon

Aquifer Designation (Superficial)



- Secondary (undifferentiated)- TILL, DEVANSIAN- ROCK D- DIAMICTON

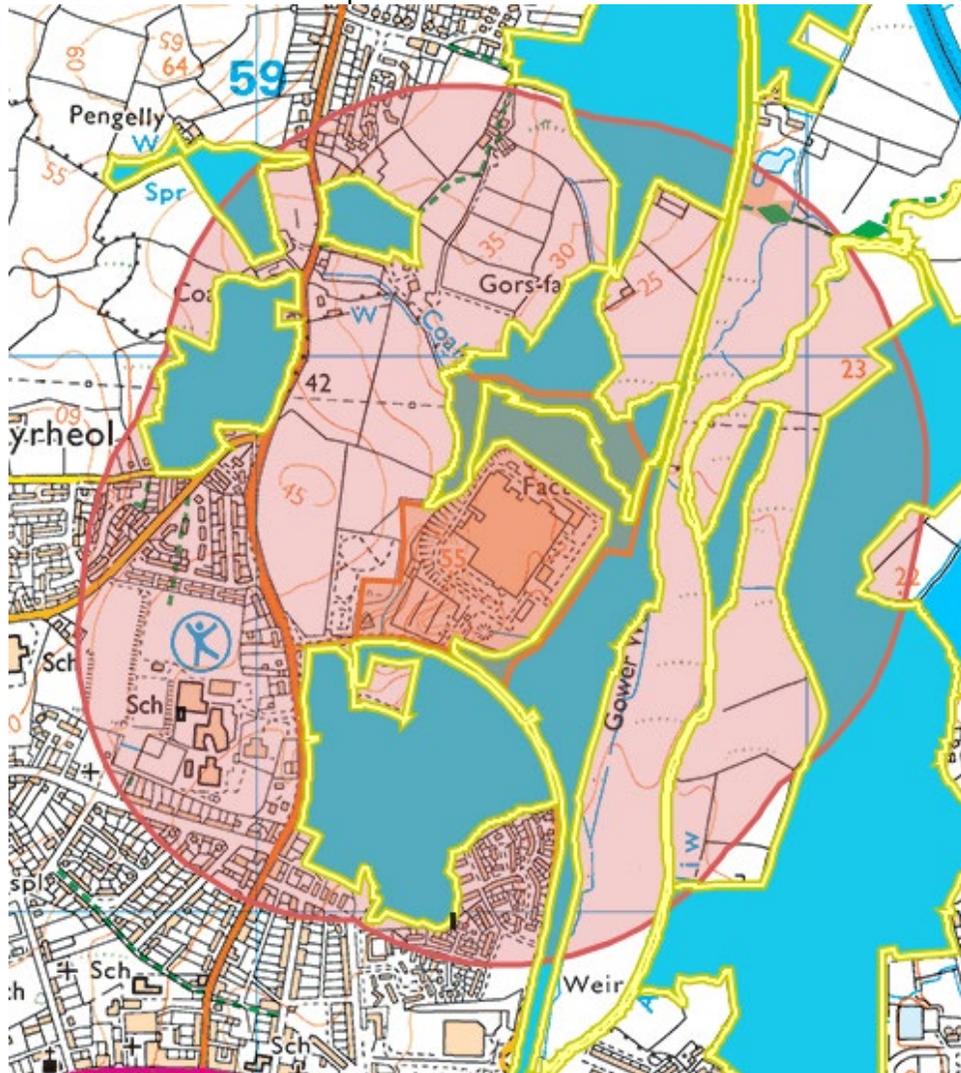
Aquifer Designation (Bedrock)

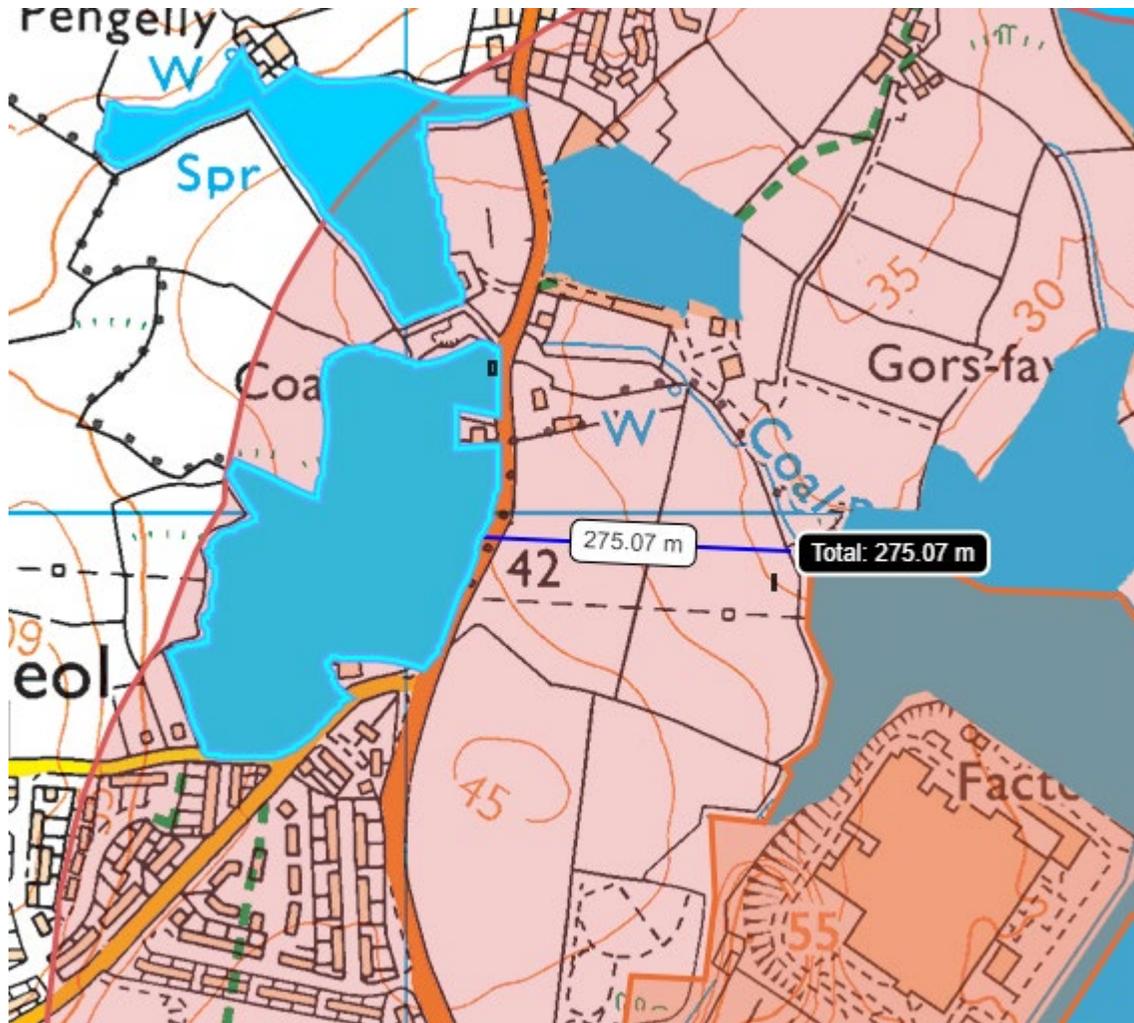


- GROVESEND FORMATION- Secondary A

local wildlife sites

For further information on please contact Swansea Council - [Deborah.Hill@swansea.gov.uk](mailto:Deborah.Hill@swansea.gov.uk)

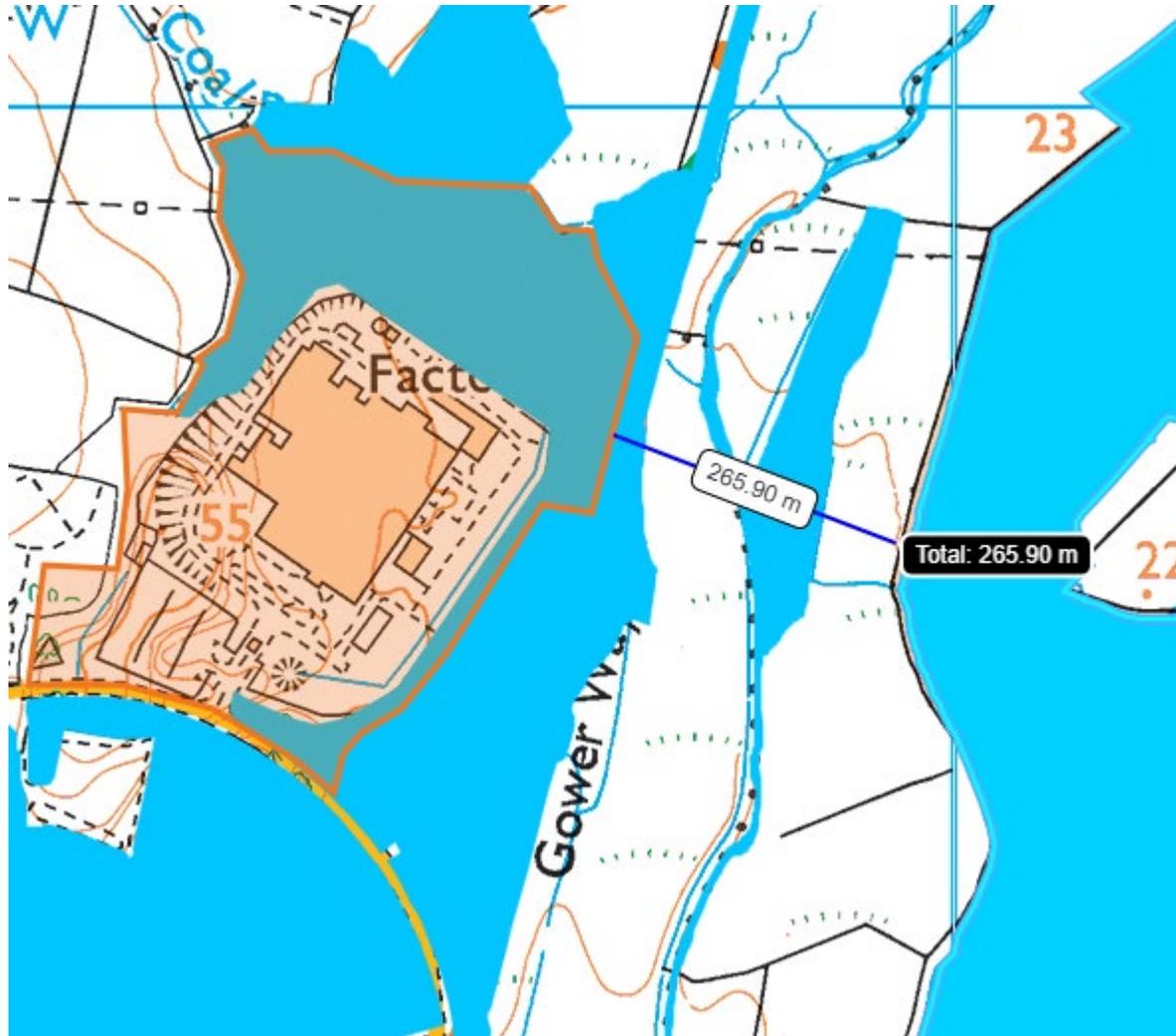




- OBJECTID: 10374. SITE\_NAME: Coalbrook Grasslands. SITE\_CODE: 330

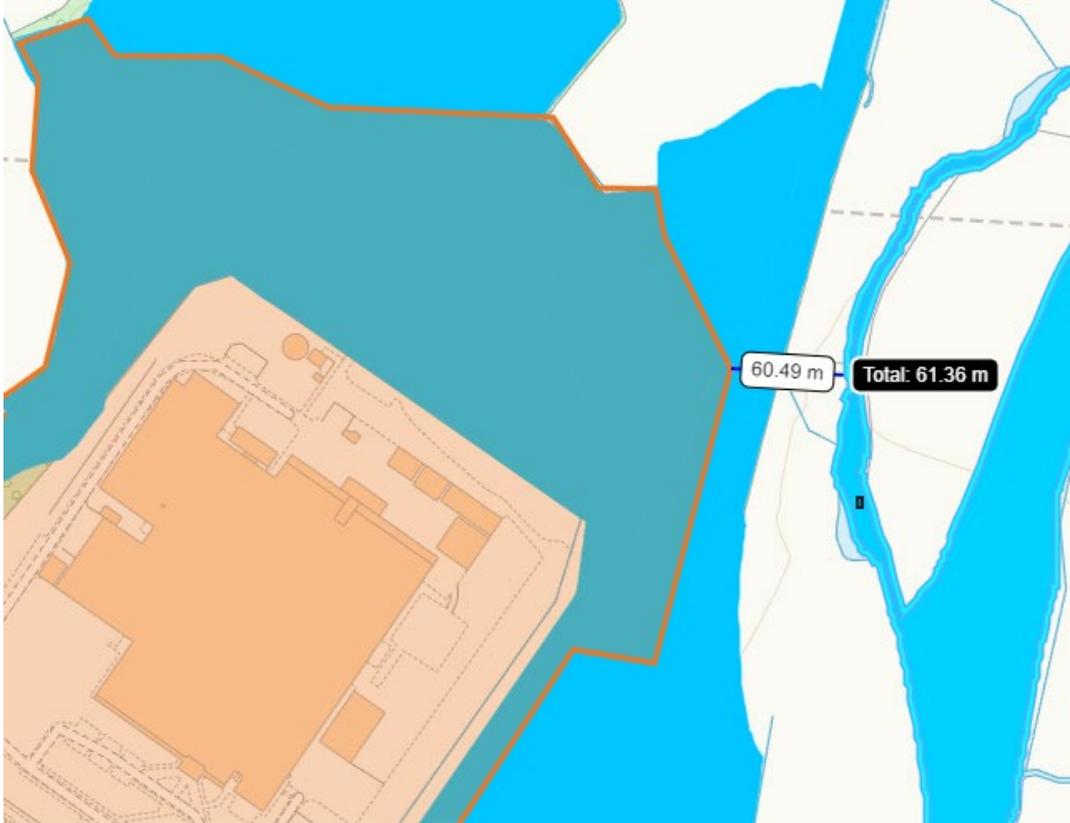


Within and surrounding permit area/boundary  
OBJECTID: 10377. SITE\_NAME: Waungron to Gowerton Railway line. SITE\_CODE: 334



OBJECTID: 10307. SITE\_NAME: Upper Mynydd Garn goch Common. SITE\_CODE: 202



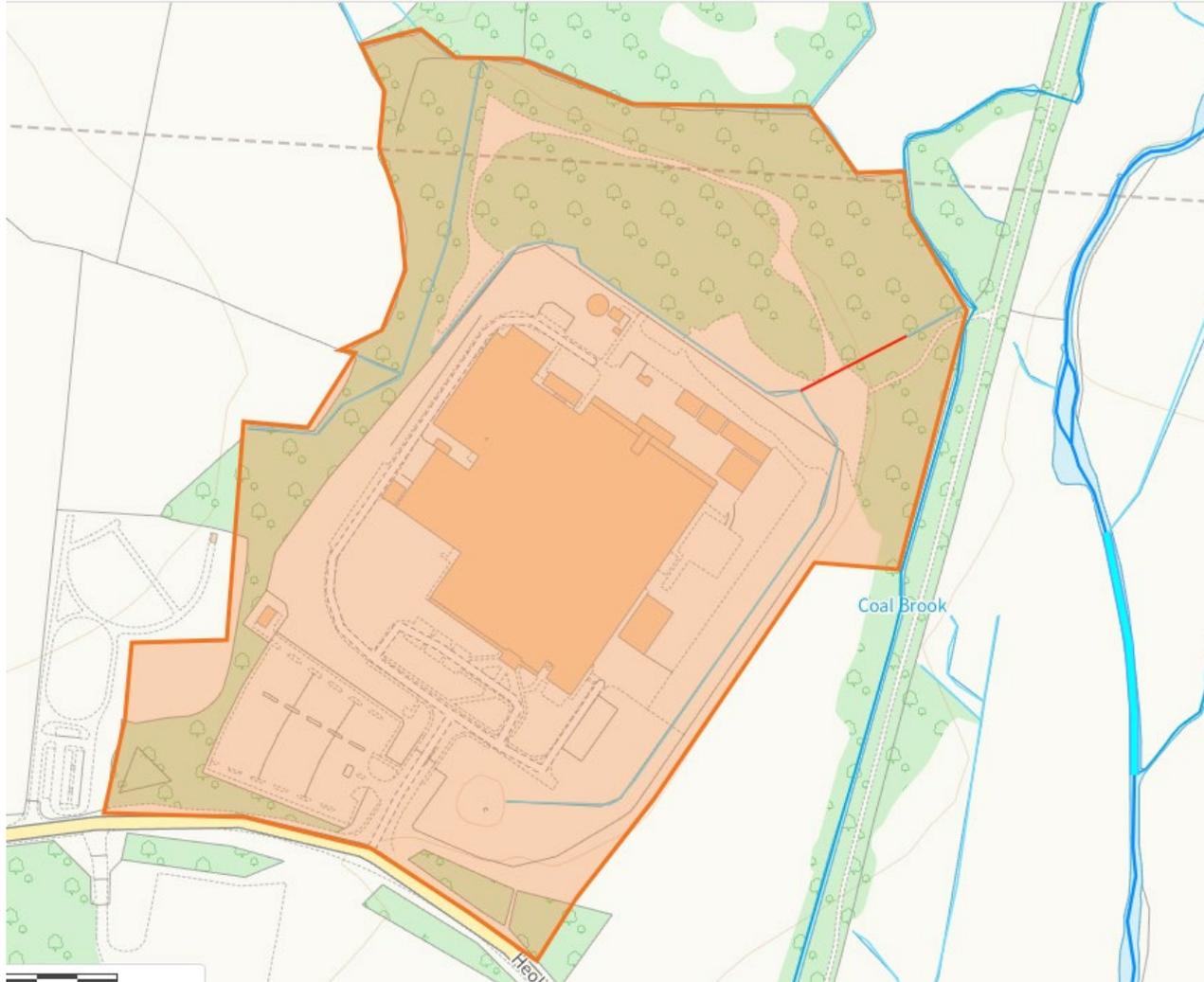


- OBJECTID: 10370. SITE\_NAME: Lower Lliw Corridor & Llan Confluence. SITE\_CODE: 326



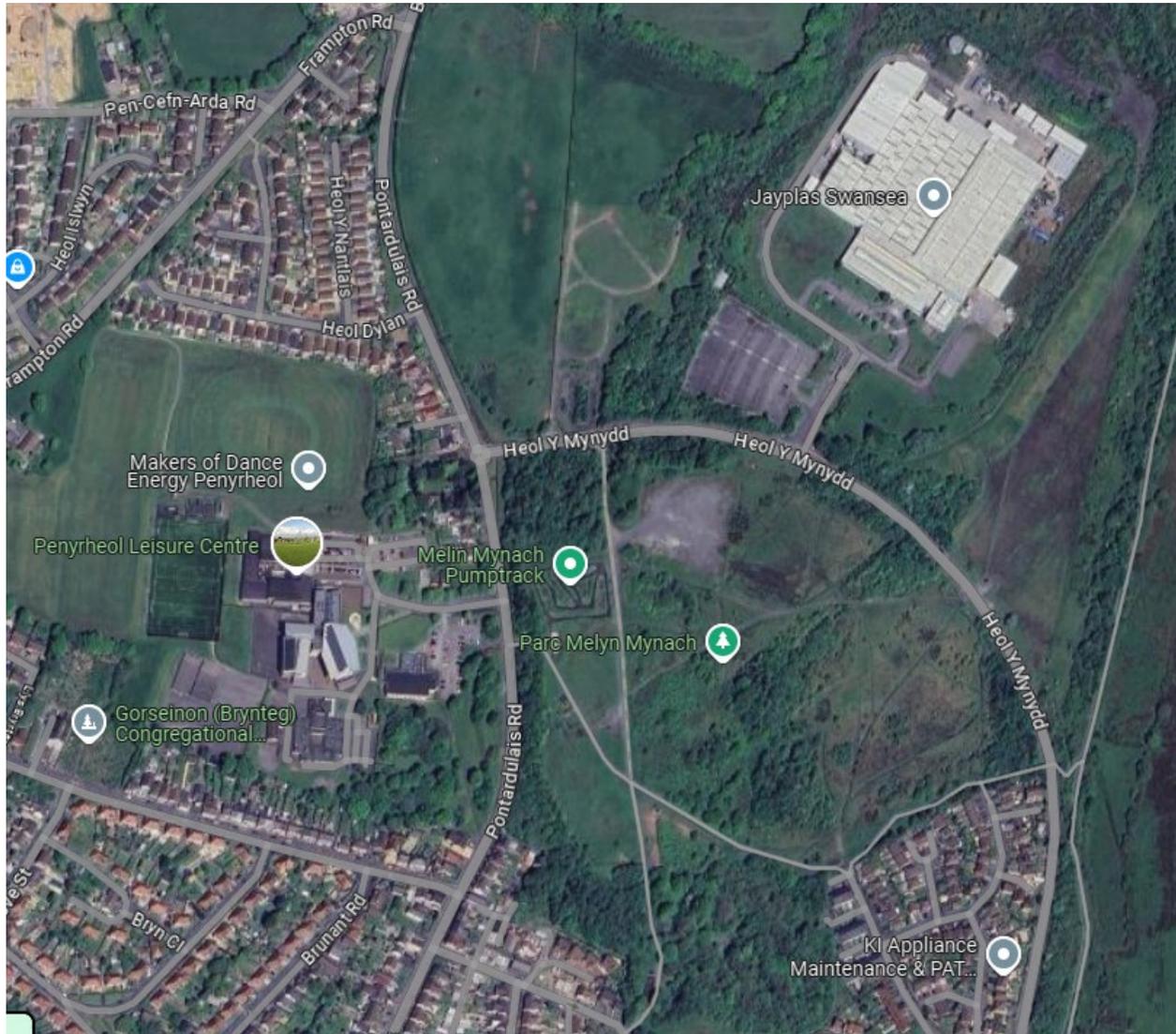
Within and surrounding permit area/boundary  
OBJECTID: 10373. SITE\_NAME: Brynlliw Grasslands. SITE\_CODE: 329

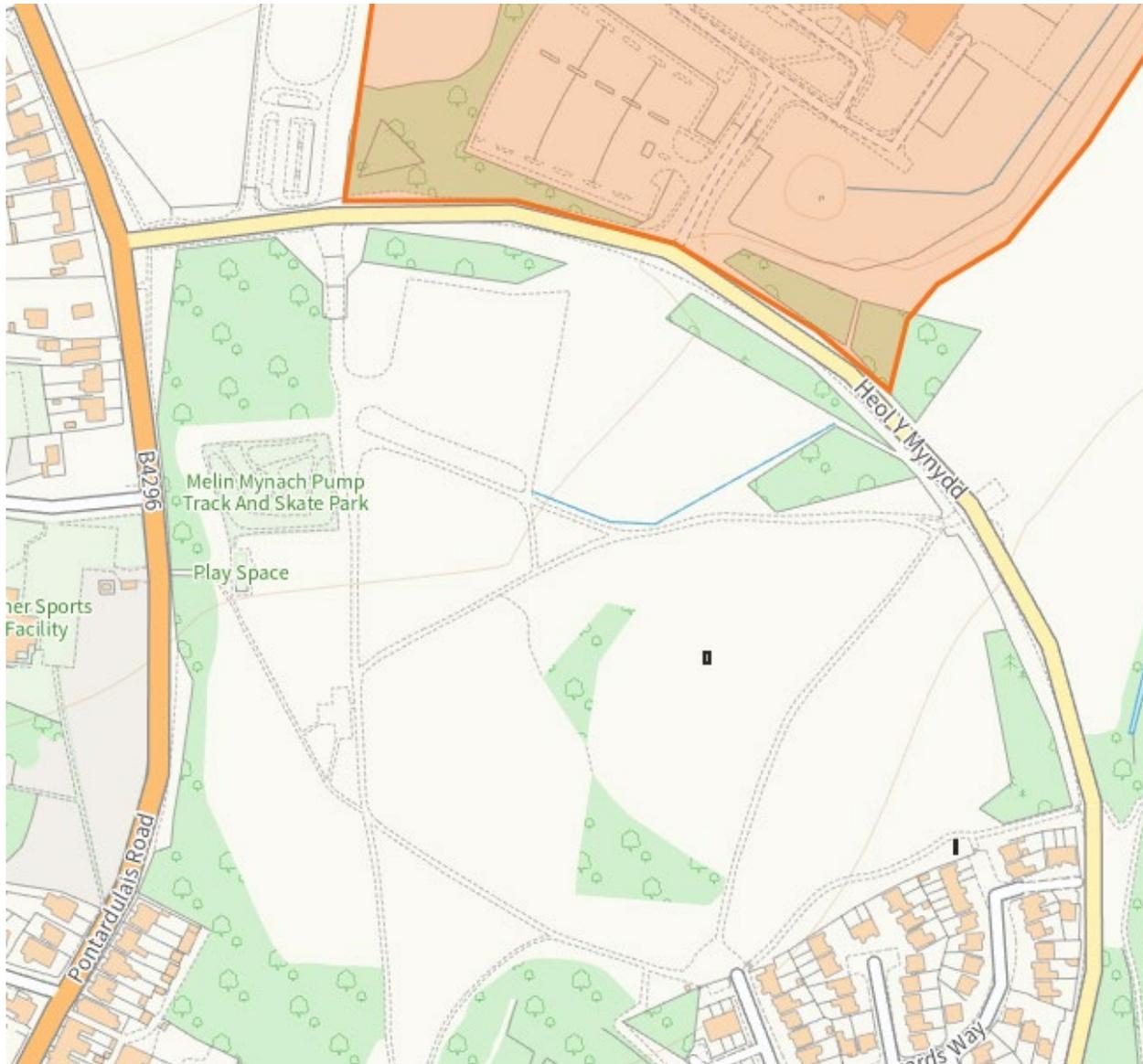
surface water courses (sinks/issues/springs/wells etc.)



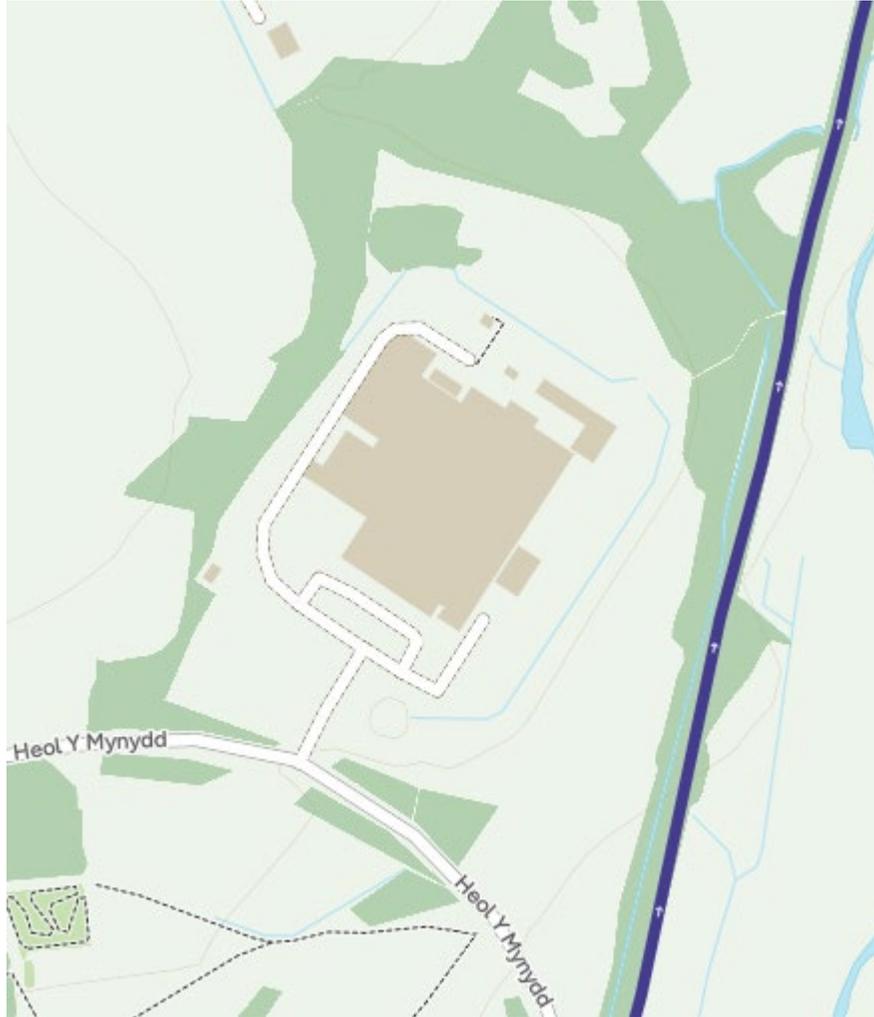
- Surface water courses within site boundary (part of the drainage system)
- Coal Brook along northern and eastern edge of permit boundary
- Afon Lliw to the east of the site

Recreational users





- recreation ground (Parc Melyn Mynach) to the south



- Gower Way footpath to the east of the site